

INTERNATIONAL
SYMPOSIUM ON

Isotope Hydrology

Revisiting Foundations
and Exploring Frontiers

Vienna, Austria
11–15 May 2015

PROGRAMME



IAEA

Water
Resources
Programme

IAEA-CN-225

**IAEA Scientific
Organising Committee:**

L. J. Araguás Araguás, IAEA
L. I. Wassenaar, IAEA
P. K. Aggarwal, IAEA

IAEA Secretariat:

Scientific Secretaries: L. J. Araguás Araguás
L. I. Wassenaar

Symposium Organizers: M. Khaelss
M. Neuhold

Administrative Support: S. Hadzic

Location of the Symposium:

International Atomic Energy Agency
Vienna International Centre (VIC)
Building C, 4th Floor
Board Room C
Wagramerstrasse 5
1400 Vienna, Austria

Tel.: +43 1 2600 21315
Fax: +43 1 2600 7 21315

Working Language: English

Resolutions: No resolutions may be submitted for consideration on any subject; no votes will be taken.

TIMETABLE

Sunday, 10 May 2015

15:00 – 19:00 Registration (Gate 1)

Monday, 11 May 2015

08:00 Registration (continued)

10:00 – 10:45 Opening Session

10:45 – 12:15 Session 1 Atmosphere-Hydrosphere Interactions; Paleoclimate and Paleohydrology; Isotopes in Precipitation

12:15 – 14:00 Lunch Break

14:00 – 15:30 Session 1 (continued)

15:30 – 16:00 Coffee/Tea Break

16:00 – 18:00 Session 2 Environmental Studies

18:00 – 20:00 Welcome Reception

Tuesday, 12 May 2015

09:00 – 11:00 Session 3 Groundwater Resources, Age Dating, and Geochemical Evolution; Noble Gas Isotope Studies

11:00 – 11:20 Coffee/Tea Break

11:20 – 12:35 Session 3 (continued)

12:35 – 14:00 Lunch Break

14:00 – 16:00 Session 3 (continued)

16:00 – 17:00 Coffee/Tea Break

16:00 – 17:30 Poster Session 1

17:00 – 19:00 Workshops 1 and 3 (for registered participants)

Wednesday, 13 May 2015

09:00 – 11:00 Session 4 Laser Spectroscopy Advances; Analytical Methods

11:00 – 11:20 Coffee/Tea Break

11:20 – 12:35 Session 5 Isotopic and Hydrological Modeling

12:35 – 14:00 Lunch Break

14:00 – 16:00 Session 6 50 years of IAEA Technical Cooperation

16:00 – 17:00 Coffee/Tea Break

16:00 – 17:30 Poster Session 2

17:00 – 18:30 Workshop 2 (open)

Thursday, 14 May 2015

09:00 – 11:00 Session 7 Surface Water Isotopic Studies; Water Pollution Studies

11:00 – 11:20 Coffee/Tea Break

11:20 – 12:35 Session 7 (continued)

12:35 – 14:00 Lunch Break

14:00 – 16:00 Session 7 (continued)

16:00 – 17:00 Coffee/Tea Break

16:00 – 17:30 Poster Session 3

17:00 – 19:00 Workshops 1 and 3 (for registered participants)

Friday, 15 May 2015

09:00 – 11:00 Session 8 Nutrient Cycles and Contamination

11:00 – 11:20 Coffee/Tea Break

11:20 – 12:40 Session 9 Frontiers in Isotope Hydrology

12:40 – 13:15 Closing Session

Display of Posters:

Posters will be displayed on the Ground Floor of Building C as follows:

Poster Session 1: Monday morning to Tuesday 18:00

Poster Session 2: Wednesday morning to Wednesday, 18:00

Poster Session 3: Thursday morning to Thursday, 18:00

Display of Commercial Exhibits:

Commercial exhibits will be displayed on the Ground Floor of Building C during the entire week.

SUNDAY, 10 MAY 2015

15:00 – 19:00 **Registration and distribution of
symposium material**

MONDAY, 11 MAY 2015

08:00 **Registration and distribution of
symposium material (continued)**

10:00 – 10:45 **OPENING SESSION**

Y. Amano
Director General
International Atomic Energy Agency

10:45 – 12:15 **SESSION 1:**
Atmosphere-Hydrosphere Interactions,
Paleoclimate and Paleohydrology,
Isotopes in Precipitation

Chairpersons: **D. Yakir, Israel**
 C. Hughes, Australia

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
INV360 10:45 – 11:15	Jouzel J.	France	Stable water isotopes: a tribute to Willi Dansgaard and Joel Gat
INV350 11:15 – 11:45	Chamberlain C. Winnick M.	United States of America	The impact of Neogene grassland expansion and aridification on the isotopic composition of continental precipitation
KN269 11:45 – 12:15	Noone D.	United States of America	Hydrological research in an isotopic data rich era: reflecting on the insight of early pioneers
12:15 – 14:00	<i>Lunch Break</i>		

MONDAY, 11 MAY 2015

14:00 – 15:30 SESSION 1 (continued):
**Atmosphere-Hydrosphere Interactions,
Paleoclimate and Paleohydrology,
Isotopes in Precipitation**

**Chairpersons: C. Chamberlain, USA
 M. Franklin, Brazil**

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
176 14:00 – 14:15	Landais, A.	France	Combined water isotope measurements to infer past climatic changes in polar ice cores
193 14:15 – 14:30	Tian, L. Wen, R.	China	Spatial and temporal changes of vapor isotopes on the Tibetan plateau
142 14:30 – 14:45	Ekaikin, A. Lipenkov, V. Shibaev, Y. Kozachek, A. Vladimirova, D.	Russian Federation	The study of paleoclimate and subglacial lake Vostok at Arctic and Antarctic research institute (Russia) using stable water isotopes
123 14:45 – 15:00	Werner, M. Butzin, M. Lohmann, G.	Germany	Simulated present and future trends of oxygen-18 in precipitation of the northern hemisphere
194 15:00 – 15:15	Bowen, G. Putman, A. Vander Zanden, H. Good, S. Liu, Z. Terzer, S. Zhao, L. West, J.	United States of America	Leveraging GNIP and investigator research to map isotopic climate: two decades of precipitation Isoscapes
159 15:15 – 15:30	Erkan, G. Bayari, C.S. Ozyurt, N. N. Cheng, H. Fleitmann, D.	Turkey	Paleoclimate in the Konya closed basin during last 45000 years based on ²³⁰ Th ages and oxygen-18 and carbon-13 records of a stalagmite in Incesu cave (Karaman, Turkey)
15:30 – 16:00	<i>Coffee/Tea Break – Ground Floor</i>		

MONDAY, 11 MAY 2015

16:00 – 18:00 **SESSION 2:**
Environmental Studies

Chairpersons: **X. Lee, United States of America**
 R. Sanchez, Costa Rica

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
INV371 16:00 – 16:30	Yakir, D.	Israel	The cascade of the isotopic signal from hydrology to global productivity of C3/C4 vegetation
191 16:30 – 16:45	Winnick, M. Chamberlain, C. P.	United States of America	Evaluating the controls of terrestrial moisture recycling and E-T partitioning on synoptic-scale isotopic gradients in precipitation: implications for monitoring the effects of climate change into the future
137 16:45 – 17:00	Palcsu, L. Major, Z. Papp, L. Rinyu, L. Koltai, G. Varlam, C.	Hungary	Connection between the solar cycle and the tritium concentration of precipitation
223 17:00 – 17:15	Caves, J. Winnick, M. Sjostrom, D. Mix, H. Ibarra, D. Mulch, A. Chamberlain, C. P.	United States of America	Combining back-trajectory modeling and measurements of water isotopes to understand the paleoclimatic record in central Asia: the impact of seasonality and topography
INV343 17:15 – 17:30	Xiao, W. Lee, X.	United States of America	Isotopic water balance of a large and shallow freshwater lake in China

MONDAY, 11 MAY 2015

16:00 – 18:00 SESSION 2:
Environmental Studies

Chairpersons: **X. Lee, United States of America**
 R. Sanchez, Costa Rica

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
190 17:30 – 17:45	Cuntz, M. Dubbert, M. Piayda, A. Correia, A. Costa E Silva, F. Kolle, O. Maguas, C. Mosena, A. Pereira, J. S. Rebmann, C. Werner, C.	Germany	Separating the contributions of vegetation and soil to evapotranspiration using stable isotopes
082 17:45 – 18:00	Veizer, J. Lee, K. Clark, I. Ferguson, P. Syakir, M.	Canada	Water and carbon budgets of large terrestrial watersheds: isotope constraints
18:00 – 20:00	<i>Welcome Reception (C Building, Ground Floor)</i>		

TUESDAY, 12 MAY 2015

09:00 – 11:00

SESSION 3:

**Groundwater Resources, Age Dating,
and Geochemical Evolution
Noble Gas Isotope Studies**

Chairpersons:

**J. Hendry, Canada
J. Halder, IAEA**

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
KN270 09:00 – 09:30	Solomon, D. K. Matsumoto, T. Aggarwal, P. Anovski, T. Palcsu, L. Ozyurt, N. Marah, H. Darling, W. G. Martinez, D. E. Tasneem, M.A. Sanda, M. Roller-Lutz, A. Fourré, E. Maruoka, T.	United States of America	Tritium- ³ He dating and noble gas techniques in water resources management: recharge, infiltration conditions and groundwater balance
076 09:30 – 09:45	Lutz, H. Matsumoto, T. Han, L. Aggarwal, P. Hunjak, T. Roller-Lutz, Z.	Croatia	Stable isotopes, tritium, cfc's and noble gases in the Gacka river region (Croatia)
239 09:45 – 10:00	Bayari, S. Ozyurt, N.	Turkey	Evolution of noble gas isotopes along the regional groundwater flow path: Konya closed basin, Turkey
274 10:00 – 10:15	Vaikmäe, R. Purtschert, R. Gerber, C. Aeschbach-Hertig, W. Weissbach, T. Mokrik, R. Babre, A.	Estonia	Groundwater residence time and palaeohydrology in the Baltic Artesian Basin: isotope geochemical data
017 10:15 – 10:30	Hadi, K.	Kuwait	Isotopic study to assess the interaction between the main aquifers in southern Kuwait

TUESDAY, 12 MAY 2015

09:00 – 11:00

SESSION 3:

**Groundwater Resources, Age Dating,
and Geochemical Evolution
Noble Gas Isotope Studies**

Chairpersons:

**J. Hendry, Canada
J. Halder, IAEA**

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
262 10:30 – 10:45	Sanford, W.	United States of America	Using a 28-year tritium record from the Potomac river to calibrate effective porosity in a regional groundwater flow system
313 10:45 – 11:00	Matsumoto, T.	IAEA	A new approach to constrain basal helium flux into aquifers for better estimation of groundwater ages by helium-4
11:00 – 11:20	<i>Coffee/Tea Break – Ground Floor</i>		

11:20 – 12:20

SESSION 3 (continued):

**Groundwater Resources, Age Dating,
and Geochemical Evolution
Noble Gas Isotope Studies**

Chairpersons:

**J. Hendry, Canada
J. Halder, IAEA**

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
INV334 11:20 – 11:50	Schwartz, F. Ganming, L.	United States of America	The challenge of complexity in groundwater age dating and paleoclimate reconstructions from lake-sediment archives
298 11:50 – 12:05	Barberá, J. Andreo, B.	Spain	Evaluation of recharge processes and flow dynamics in a karst complex system by using water isotope data: the case study of Merinos-Colorado-Carrasco carbonate aquifer (S Spain)
106 12:05 – 12:20	Jasechko, S. Gleeson, T.	Canada	Groundwater renewal rates, seasonal recharge dynamics and paleoclimate records
032 12:20 – 12:35	Ouda, B. Marah, H.	Morocco	Use of environmental isotopes to investigate impact of artificial recharge on groundwater Haouz basin of Morocco
12:35 – 14:00	<i>Lunch Break</i>		

TUESDAY, 12 MAY 2015

14:00 – 16:00 **SESSION 3 (continued):**
Groundwater Resources, Age Dating,
and Geochemical Evolution
Noble Gas Isotope Studies

Chairpersons: **H. Chang, Brazil**
 L. Wassenaar, IAEA

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
KN199 14:00 – 14:30	Phillips, F.	United States of America	Chlorine-36 as a tracer for subsurface flow paths and residence times
284 14:30 14:45	Bouchez, C. Deschamps, P. Goncalves, J. Hamelin, B. Sylvestre, F. Dournang, J. C. Mahamat Nour, A. Goni, I. B. Favreau, G. Genthon, P. Seidel, J. L.	France	Chlorine-36 dating of the deep confined aquifer groundwaters of lake Chad basin
244 14:45 – 15:00	Koeniger, P. Houben, G. Stoeckl, L. Himmelsbach, T. Sültenfuß, J.	Germany	Groundwater recharge investigations using stable water isotopes of soil and groundwater combined with depth-specific age dating of freshwater lenses at Langeoog island, Germany
280 15:00 – 15:15	Alshamsi, D. Murad, A. Aldahan, A. Hou, X.	United Arab Emirates	The distribution of ²³⁸ U, ²³⁵ U and ²³² Th in carbonate aquifers and implications for groundwater: a case study from the UAE
278 15:15 – 15:30	Miller, J. Nakwafila, A. Dunford, A. Clarke, C.	South Africa	Integrated use of O, H, Sr and ³⁶ Cl isotopes to understand salinisation of river and groundwater systems in arid and semi-arid environments: a case study from the Buffels river, Northern Cape, South Africa

TUESDAY, 12 MAY 2015

14:00 – 16:00 **SESSION 3 (continued):**
Groundwater Resources, Age Dating,
and Geochemical Evolution
Noble Gas Isotope Studies

Chairpersons: **H. Chang, Brazil**
 L. Wassenaar, IAEA

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
075 15:30 – 15:45	Mayer, B. Humez, P. Nightingale, M. Kingston, A. Ing, J. Becker, V.	Canada	Isotopic tools for groundwater monitoring to assess the potential environmental impact of shale gas development
362 15:45 – 16:00	Marui, A.	Japan	Contaminated groundwater problems at Fukushima Daiichi nuclear power station and countermeasures at the beginning of 2015
16:00-17:00	<i>Coffee/Tea Break – Ground Floor</i>		

16:00 – 17:30 **POSTER SESSION 1:**
(C Building, Ground Floor)
Groundwater resources, age dating and
geochemical evolution
Noble gas isotope studies

17:00 – 19:00 **WORKSHOP 1 / Group A (Room F0604)**
Introduction to Tracer LPM
(for registered participants only)

17:00-19:00 **WORKSHOP 3 / Group A (Room F0683)**
Noble Gases
(for registered participants only)

WEDNESDAY, 13 MAY 2015

9:00 – 11:00

SESSION 4:

Laser Spectroscopy Advances Analytical Methods

Chairpersons:

W. Aeschbach-Hertig, Germany
N. Hendriksson, Finland

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
INV346 09:00 – 09:30	Schlosser, P.	United States of America	Applications of isotopes in oceanography
KN002 09:30 – 10:00	Lu, Z. Jiang, W. Jake, Z. Bailey, K. Mueller, P. O'Connor, T.	United States of America	^{81}Kr : a new tracer of old groundwater flow
INV134 10:00 – 10:15	Aeschbach-Hertig, W. Ritterbusch, F. Ebser, S. Welte, J. Reichel, T. Kersting, A. Purtschert, R. Oberthaler, M.	Germany	Groundwater dating with atom trap trace analysis of ^{39}Ar
INV344 10:15 – 10:30	Murnick, D.	United States of America	Laser based radiocarbon analysis
252 10:30-10:45	Herbstritt, B. Gralher, B. Weiler, M.	Germany	Real-time analysis of stable water isotopes in highly dynamic systems
236 10:45 – 11:00	Keesari, T. Kendall, C. Young, M. B. Silva, S. Peek, S. Choi, D.	India	Development of method for efficient extraction of dissolved organic matter for isotopic characterization in natural waters
11:00 – 11:20	<i>Coffee/Tea Break – Ground Floor</i>		

WEDNESDAY, 13 MAY 2015

11:20 – 12:35 **SESSION 5:**
Isotopic and Hydrological Modeling

Chairpersons: **M. Sanda, Czech Republic**
 L. Barbour, Canada

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
KN335 11:20 – 11:50	Kipfer, R. Brennwald, M.	Switzerland	Noble gas analysis in water: from temperature reconstruction over excess formation to oxygen turnover on environmentally relevant time scales
062 11:50 – 12:05	Kania, J. Witczak, S. Szklarczyk, T. Rozanski, K. Dulinski, M. Sliwka, Purtschert, R.	Poland	Environmental tracers as a calibration tool for 3D flow and transport models: case studies from southern Poland
212 12:05 – 12:20	Hendriksson, N. Saraperä, S. Artimo, A.	Finland	Water isotopes in monitoring artificial groundwater recharge and validating the 3D groundwater flow model results
300 12:20 – 12:35	Clark, I. Al, T. Jensen, M. Raven, K.	Canada	Cl ⁻ , δ ¹⁸ O and d: the triumvirate of tracers for aquitard porewaters
12:35 – 14:00	<i>Lunch Break</i>		

WEDNESDAY, 13 MAY 2015

14:00 – 16:00 **SESSION 6:**
50 years of IAEA Technical Cooperation

Chairpersons: **L. Rodriguez, Argentina**
 L. Araguas, IAEA

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
307 14:00 – 14:15	Travi, Y.	France	Revisiting 50 years of hydrology TC: history and present evolution, focusing on Sahel zone
365 14:15 – 14:30	Zouari, K.	Tunisia	Progress in the implementation of the project RAF7011 on the assessment of shared aquifer systems in the Sahel region: preliminary results
097 14:30 – 14:45	Ahmed, N. Choudhry, M. Hossain, S. Moniruzzaman, M. Dev, N.	Bangladesh	Using isotopic tracers as a tool for understanding groundwater dynamics, recharge mechanism and residence time of aquifer system in the Surma basin, north eastern of Bangladesh
198 14:45 – 15:00	Chang, H. Gastmans, D. Aggarwal, P. Matsumoto, T. Araguas, L. Sturchio, N. Jiang, W. Lu, Z. Müller, P. Yokochi, R. Purtschert, R. Torgensen, T.	Brazil	Determination of groundwater residence times in the northeastern portion of Guarani aquifer system (Brazil) using ⁸¹ Kr, ¹⁴ C and ⁴ He
288 15:00 – 15:15	Tindimugaya, C. Cole, E.	Uganda	Groundwater in sustainable management of the shared Nile basin water resources: the role of isotope hydrology
222 15:15 – 15:30	Rabe, S. Kamel, Z.	Niger	Isotopic and chemical investigation for groundwater management strategies in the Iullemeden Aquifer System (IAS): southwest part of Niger

WEDNESDAY, 13 MAY 2015

14:00 – 16:00 **SESSION 6:**
50 years of IAEA Technical Cooperation

Chairpersons: **L. Rodriguez, Argentina**
 L. Araguas, IAEA

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
187 15:30 – 15:45	Gebremichael, M. Shiferaw, D. Abebe, A.	Ethiopia	The national isotope hydrology laboratory and its impact on water research in Ethiopia
347 15:45 – 16:00	Wassenaar, L.	IAEA	Improving outcomes in Member State isotope laboratories – an overview of IAEA isotope hydrology training and intercomparison testing programs
16:00-17:00	<i>Coffee/Tea Break – Ground Floor</i>		

16:00 – 17:30 **POSTER SESSION 2:**
Laser Spectroscopy Advances
Analytical Methods
Nutrient Cycles and Contamination
Water Pollution Studies

17:00 – 18:30 **WORKSHOP 2 (Board Room C)**
New Developments in Stable Isotopic
Measurements by Laser Spectrographs
and High Precision Water Isotope
Analyses
(open)

THURSDAY, 14 MAY 2015

09:00 – 11:00 **SESSION 7:**
Surface Water Isotopic Studies
Water Pollution

Chairpersons: **J. Veizer, Canada**
 Y. Travi, France

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
KN345 09:00 – 09:30	Lakshmi, V.	United States of America	Role of satellite remote sensing in quantification of the hydrological cycle
074 09:30 – 09:45	Ortega, L. Manzano, M. Custodio, E. Hornero, J. Rodriguez-Arevalo, J.	Spain	Using ²²² Rn to identify and quantify groundwater inflows to the Mundo river (SE Spain)
289 09:45 – 10:00	Kralik, M. Brielmann, H. Humer, F. Grath, J. Philippitsch, R.	Austria	MRT's of 20 Austrian groundwater bodies and its relevance for the implementation of the European Water Framework directive
224 10:00 – 10:15	Morgenstern, U. Stewart, M. Daughney, C.	New Zealand	Transit times of base flow in New Zealand rivers
318 10:15 – 10:30	Belachew, D. Leavesley, G. David, O. Aggarwal, P. Cralson, J. Patterson, D.	IAEA	Isotope-enabled coupled catchment-lake water balance model, IWBMIso: description and validation
192 10:30 – 10:45	Hollins, S. Crawford, J. Hughes, C. Meredith, K. Cendón, D.	Australia	Expanded observations of stable water isotopes in Australian rainfall: improved understanding of variability and climate controls for applications in hydrological studies
243 10:45 – 11:00	Deshpande, R. Gupta, S. K. Padhya, V.	India	Hydro-meteorological processes in India: revelations from stable isotopes in precipitation
11:00 – 11:20	<i>Coffee/Tea Break – Ground Floor</i>		

THURSDAY, 14 MAY 2015

11:20 – 12:35 **SESSION 7 (continued):**
Surface Water Isotopic Studies
Water Pollution

Chairpersons: **J. Veizer, Canada**
 Y. Travi, France

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
177 11:20 – 11:35	Diadin, D. Vystavna, Y.	Ukraine	Temporal and spatial variations in stable isotopes (¹⁸ O and ² H) and major ion concentration within the Seversky Donets water catchment, east Ukraine
330 11:35 – 11:50	Mosquera, G. Lazo, P. Crespo, P. Celleri, R.	United States of America	Water isotopes as tools for identifying water sources in high-elevation tropical ecosystems: a case of study in the Ecuadorian Andes
186 11:50 – 12:05	Penna, D. Engel, M. Bertoldi, G. Comiti, F.	Italy	Water sources, runoff contributions and mixing processes investigated by stable isotopes of water and electrical conductivity: a study in a glacierized catchment in the Italian Alps
012 12:05 – 12:20	Gibson, J.	Canada	Isotope-based assessment of water balance along chain-of-lakes drainages in the continental arctic and subarctic of Canada
317 12:20 – 12:35	Halder, J.	IAEA	Global network of isotopes in rivers (GNIR): stable water isotopes in rivers for catchment and hydrological cycle observation
12:35 – 14:00	<i>Lunch Break</i>		

THURSDAY, 14 MAY 2015

14:00 – 16:00 **SESSION 7 (continued):**
Surface Water Isotopic Studies
Water Pollution

Chairpersons: **R. Krishnamurthy, USA**
 C. Tindimugaya, Uganda

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
184 14:00 – 14:15	Kumar, A. Sanyal, P.	India	Isotopic variations ($\delta^{18}\text{O}$ and δD) in large river system and its implication to water budget: A case study from the river Ganges, India
124 14:15 – 14:30	Isokangas, E. Rozanski, K. Rossi, P. Ronkanen, A. K. Kløve, B.	Finland	Assessing groundwater dependence of sub-polar lakes through isotope mass balance method
145 14:30 – 14:45	Toor, G.	United States of America	Water quality in urban systems: tracking nitrogen transport using nitrogen, oxygen, and water isotopes
049 14:45 – 15:00	Corcho Alvarado, J.	Switzerland	$^{234}\text{U}/^{238}\text{U}$ isotopic ratio in water as indicator of uranium contamination: a study case in Mailuu Suu (Kyrgyzstan)
034 15:00 – 15:15	Krishnamurthy, R. Dudek, R. Hampton, D.	United States of America	Triple isotope analysis of ground water samples from an urban setting in south west Michigan, USA
209 15:15 – 15:30	Marchesi, M. Aravena, R. Thomson, N. R. Hunkeler, D. Bouchard, D. Shayan, M. Solano, F. Barker, J. Buscheck, T.	Italy	Compound-specific isotope analysis (CSIA) for performance assessment of organic pollutants remediation by in-situ chemical oxidation (ISCO): a critical review

THURSDAY, 14 MAY 2015

14:00 – 16:00 **SESSION 7 (continued):**
Surface Water Isotopic Studies
Water Pollution

Chairpersons: **R. Krishnamurthy, USA**
 C. Tindimugaya, Uganda

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
282 15:30 – 15:45	Aravena, R.	Canada	Application of environmental isotopes in mining studies
093 15:45 – 16:00	Hendry, M.	Canada	The value of high-resolution vertical profiles of $\delta^{18}\text{O}$ and $\delta^2\text{H}$ in saturated geologic media
16:00-17:00	<i>Coffee/Tea Break – Ground Floor</i>		

16:00 – 17:30 **POSTER SESSION 3:**
Atmosphere-Hydrosphere Interactions
Paleoclimate and Paleohydrology
Isotopes in Precipitation
Environmental Studies
Surface Water Isotopic Studies

17:00 – 19:00 **WORKSHOP 1 / Group B (Room F0604)**
Introduction to Tracer LPM
(for registered participants only)

17:00-19:00 **WORKSHOP 3 / Group B (Room F0683)**
Noble Gases
(for registered participants only)

FRIDAY, 15 MAY 2015

09:00 – 11:00

SESSION 8:

Nutrient Cycles and Contamination

Chairpersons:

B. Mayer, Canada
J. Ehleringer, USA

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
KN295 09:00 – 09:30	Wells, N. Knoeller, K. Fenton, O. Clagnan, E. Brauns, M.	Germany	Beyond nitrate: developing multi-isotopic approaches to quantify the fate and transport of nitrogen within catchments
264 09:30 – 09:45	Young, M. Kendall, C. McLaughlin, K. Paytan, A.	United States of America	Oxygen isotopes as a tracer of phosphate sources and cycling in aquatic systems
109 09:45 – 10:00	Leis, A. Dietzel, M. Saccon, P. Stadler, H. Savarino, J. Erbland, J. Morin, S. Kaiser, J. Marca, A. Campisi, L.	Austria	Tracing the origin and fate of atmospheric nitrate in aquatic systems – insights from triple oxygen isotopes
013 10:00 – 10:15	Kihumba Mfumu, A. Vanclooster, M. Ndembo Longo, J. Boeckx, P.	Congo, Democratic Rep.	Use of hydrochemical and isotopes for assessing nitrate pollution pressure in the Kinshasa groundwater body / DR Congo
249 10:15 – 10:30	Brielmann, H. Kralik, M. Humer, F. Clara, M. Weiss, S. Kulscar, S. Scharf, S. Voerkelius, S.	Austria	Identifying anthropogenic nitrogen sources in ground- and surface water by combining nitrate stable isotopes and a new multi parameter test

FRIDAY, 15 MAY 2015

09:00 – 11:00 SESSION 8:
Nutrient Cycles and Contamination

Chairpersons: B. Mayer, Canada
J. Ehleringer, USA

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
276 10:30 – 10:45	Caschetto, M. Colombani, N. Mastrocicco, M. Aravena, R.	Italy	Multi-isotopic study to identify processes affecting nitrogen and sulfur in an anthropogenic impacted alluvial coastal aquifer
241 10:45 – 11:00	Goody, D.	United Kingdom	Understanding nutrient sources and processing in an environmentally stressed catchment using a novel combined stable isotope approach
<hr/>			
11:00 – 11:20	<i>Coffee/Tea Break – Ground Floor</i>		

11:20 – 12:40 SESSION 9:
Frontiers in Isotope Hydrology

Chairpersons: F. Longstaffe, Canada
G. Bowen, USA

<i>No. of Paper IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
INV370 11:20 – 11:40	Bloeschl, G.	Austria	Frontiers In catchment hydrology
KN356 11:40 – 12:00	Ehleringer, J. Barnette, J. Jameel, Y. Tipple, B. Bowen, G.	United States of America	Frontiers in ecohydrology - from isoscapes to urban water
INV372 12:00 – 12:20	Aeschbach-Hertig, W.	Germany	Analytical developments: New perspectives for isotope hydrology
INV375 12:20 – 12:40	Longstaffe, F. Aggarwal, P.K.	Canada	Isotopes in precipitation and groundwater studies: future perspectives

FRIDAY, 15 MAY 2015

12:40 – 13:15 CLOSING SESSION

**Chairpersons: L. Wassenaar, IAEA
 L. Araguas, IAEA**

**Aldo Malavasi
Deputy Director General
Department of Nuclear Sciences and
Applications, IAEA**

POSTERS

Poster Session 1: Tuesday, 12 May 2015, 16:00-17:30

Groundwater resources, age dating and Geochemical evolution

Noble gas isotope studies

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
Groundwater resources, age dating and geochemical evolution			
003p	Bahir, M. El Moukhar, R. Carreira, P.M.	Morocco	Isotopic and geochemical methods for groundwater management strategies under semi-arid area: case of the Wadi Ouazzi basin (Morocco)
006p	Malov, A.	Russian Federation	On the potential use of ^{234}U - ^{238}U to infer chronological constraints on fluid residence time in oxidising conditions for uranium in sandstone aquifers
014p	Wan Muhamad Tahir, W. Hussin, N. H. Yusoff, I.	Malaysia	Qualitative assessment of groundwater recharge-rate and origin in north Kelantan river basin using environmental water stable isotopes, tritium and chloride data
016p	Kaup, H.	Kuwait	Stable isotopes and tritium in groundwater of Kuwait
018p	Al-Senafy, M.	Kuwait	Assessment of stable isotopes and groundwater quality to evaluate the water rise problem in Al-Qurain area, Kuwait
020p	Ali, K. K. Ajeena, A.	Iraq	Stable isotopic composition of surface and groundwater in Dammam aquifer southern Iraq - a case study
021p	Bouchaou, L. Hsaissoune, M. Beraaouz, E. H. Michelot, J.L. El Fasskaoui, M.	Morocco	The use of environmental isotopes to assess sustainability of intensively exploited aquifer systems in semi-arid area: case of Souss-Massa (southern Morocco)
026p	Qurtobi, M. Marah, H.	Morocco	Use of isotope and geochemical tracers to investigate groundwater recharge and salinity in Berrechid shallow aquifer (Morocco)

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
027p	Celle-Jeanton, H. Huneau, F. Ahmad, N. Bocanegra, E. Bouchaou, L. Carillo Rivera, J. Hoc, B. Kania, J. Kumar, B. Morgenstern, U. Osae, S. Ouyse, S. Rao, M. Roriguez Arevalo, J. Rozanski, K. Trabelsi, R. Zouari, K. Zongyu, C.	France	Use of environmental isotopes to assess sustainability of intensively exploited aquifer systems (2012-2015): first results of the Coordinated Research Project CRP F33019
028p	Marques, J. Neves, O. Rocha, C. Etiope, G. Vance, S. Christensen, L. Carreira, P.	Portugal	Water and gas (CH ₄) isotopic composition of hyperalkaline mineral waters issuing within intrusive ultramafic rocks (Portugal)
037p	Adedeji, A. Jabo, S. M. Hussaini, S. U.	Nigeria	Preliminary interpretation of isotopic and hydrochemical results of the first sampling campaign in the Nigerian sector of the Iullemeden basin under the integrated and sustainable management of shared aquifer systems and basins of the Sahel region, IAEA TC project RAF/7/0/11
042p	Garel, E. Huneau, F. Santoni, S. Mayer, A. Radakovitch, O. Cockenpot, S. Claude, C.	France	A radium and radon tracing experiment to estimate low submarine groundwater discharge (aquifer of Bonifacio, Corsica, France)
043p	Ben Ammar, S. Ibrahim, F.	Tunisia	Study of a multilayered aquifer in the NE part of Tunisia- Oued Guenniche, using environmental isotopes and geochemistry
044p	Ben Ammar, S. Zouari, K.	Tunisia	Groundwater salinization in a coastal phreatic aquifer -Oussja-Ghar el Malah (Tunisia): origin and mechanism

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
047p	Trabelsi, R. Zouari, K. Ayadi, R. Kumar, B. Khanfir, H.	Tunisia	The use of stable isotopes and chemical tracers to assess groundwater quality evolution of intensively exploited aquifer. The example of Sfax shallow aquifer (south-east Tunisia)
048p	Pärn, J. Raidla, V. Vaikmäe, R. Martma, T. Ivask, J. Kaup, E. Mokrik, R.	Estonia	The intrusion of glacial melt-water and its influence on the geochemical evolution of groundwater in the Ordovician-Cambrian aquifer system in the northern part of the Baltic Artesian Basin (Estonia)
050p	Ioannidou, A. Noli, F. Vargemezis, G. Kazakis, N.	Greece	The uranium isotopes in the characterization of groundwater in Anthemountas river basin, northern Greece
053p	Khalaj Amirhosseini, Y. Balderer, W. Babaei Koochaksaraee, S. Jafari, F. Rahanjam, M.	Iran	Determining the source of groundwater salinity using isotope and hydro chemical tracing methods (case study: Azarshahr catchment area, Azarbaijan province, Iran)
055p	Sam, A. Mohamed Elamin, G. Mohamed Babiker, S. E. Ismail Yagob, T. Eltayeb, H.	Sudan	Minor and trace element concentration in groundwater from Bara aquifer west central Sudan
058p	Carreira, P. Marques, J. M. Carvalho, M. R. Antunes Da Silva, M. Oliveira, A. Vieira Da Silva, A.	Portugal	Isotopic and geochemical signatures to assess similarities and differences in some mineral waters (N – Portugal)

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
059p	Carreira, P. Nunes, D. Figueiredo, P. Rei, J. Caracho, A. Gomes, R. Marques, J. M. Neves, M.	Portugal	Environmental isotopes as a tool to assess groundwaters for viability study using GHPS in a military facility (Portugal): preliminary results
070p	Bartyzel, J. Rozanski, K. Dulinski, M.	Poland	Dating of young groundwaters using anthropogenic gaseous tracers: methodology and first results
077p	Dhaoui, Z. Zouari, K. Taupin, J. D.	Tunisia	Geochemical and isotopic study of the Continental ilintercalaire aquifer system recharge in the eastern piedmont of Dahar (southern Tunisia): origin and processes
079p	Kpegli, K. A. R. Alassane, A. Dovonon, F. Mama, D. Boukari, M. Zouari, K.	Benin	Groundwater flow characterization in Kandi basin (Benin, West Africa): a combined classic hydrogeological and isotopic approach
080p	Roller-Lutz, Z. Ozyurt, N. Lutz, H. Hunjak, T. Mance, D.	Croatia	Characterisation of the Gacka river basin karst aquifer (Croatia): hydrochemistry, stable isotopes and tritium-based mean residence times
084p	Hadj Ammar, F. Zouari, K. Chkir, N. Deschamps, P. Hamelin, B. Aigoun, A.	Tunisia	Isotopic composition of the Complexe Terminal aquifer in southern Tunisia
086p	Ammar, K. Ismail, S.	United Arab Emirates	Geochemical and isotopic evidence for assessing recharge efficiency from Ham dam in Ham catchment area in the United Arab Emirates
089p	Balderer, W. Leuenberger, F. Rahamjam, M. Jafari, F. Khalaj, Y. Kumar, B.	Switzerland	Origin of saline groundwater within lake Urmia area/Iran based on chemical and isotope data

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
099p	Fekri, A. Laftouhi, N. E.	Morocco	The use of isotopic indicators for aquifer functioning assessment in arid climate (Essaouira synclinal, Morocco)
100p	Gibson, J. Birks, J. Yi, Y. Moncur, M.	Canada	Surface-groundwater interaction in the Athabasca oil sands region, Canada
102p	Ortega, L. Manzano, M. Rodriguez-Arevalo, J. Heredia, J.	Spain	Testing the usefulness of ²²² Rn to trace groundwater flow in a complex multi-level aquifer in Ubeda (Jaén, SE Spain)
103p	Badamgarav, E. Lunten, J.	Mongolia	The ground water research study by using isotope method in Gobi desert area of Mongolia in 2013
136p	Marrero-Diaz, R. Carvalho, M. R. Policarpo, A. Carreira P.	Portugal	Tracing groundwater salinization of thermo-mineral waters in Estoril region by geochemical and isotopic approach
140p	Maldonado, L. Cabrera, A. Blarasin, M. Dapeña, C. Panarello, H.	Argentina	Geochemistry and age of groundwater in confined aquifers from Argentina: The Chacopampeana plain
147p	Peres de Araujo, V. Manzano, M. Toro Espitia, L. E. Araguas, L. Melo, L. Franklin, M.	Brazil	Using isotopes and hydrochemistry to assess the groundwater flow regime and recharge processes in a fractured aquifer in northeastern Brazil
150p	Avci, P. Bayari, C. S. Ozyurt, N. N.	Turkey	Environmental isotopes as a tool for food security: sustainable groundwater management in the coastal Demre plain (Antalya, SW Turkey)
152p	Franklin, M Peres de Araujo, V. Manzano, M. Toro Espitia, L. E. Melo, L. Araguas, L.	Brazil	Use of ³ H and ¹⁴ C to characterize the flow system in a fractures aquifer and their implication on water quality

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
153p	Melikadze, G. Vitvar, T.	Georgia	Assessment of recharge origin and flow paths of groundwater in the Alazani-Iori-Shiraki basins, eastern Georgia, using isotopes
162p	Balderer, W. Jafari, F. Khalaj Amirhosseini, Y. Javadi, S.	Switzerland	Investigation of salt-water intrusion by environmental isotope in Shiramin aquifer-Iran
163p	Mezga, K. Urbanc, J. Lojen, S.	Slovenia	Isotopic investigations of dissolved inorganic carbon ($\delta^{13}\text{C-DIC}$) in Slovenian groundwaters
172p	Dogramaci, S. Skrzypek, G.	Australia	Identifying the origin of dissolved solutes in groundwater of an ancient landscape using stable Sr, H and O isotope compositions, NW Australia
179p	Odeloui, T. Alassane, A. Daouda, M. Sambienou, G. Boukari, M. Huneau, F. Garel, E. Celle-Jeanton, H. Lavastre, V.	Benin	Isotope hydrology and geochemistry to understand groundwater recharge and fresh water/marine water interactions along the littoral zone of Benin
180p	Van Geldern, R. Baier, A. Subert, H. Kowol, S. Balk, L. Mader, M. Barth, J.	Germany	Pleistocene paleo-groundwater in southern Germany
183p	Salgado, J. C. Aguirre, E. Gallardo, P. Moya, P.	Chile	Hydrogeological evaluation of the Calama and rio Salado aquifers using isotopic tools: preliminary results
185p	Chang, H. Dias Gonçalves, R. Stradioto, M. R. Hespanhol, E. Aggarwal, P. K. Araguas, L.	Brazil	Preliminary integrated $\delta^{18}\text{O}$ map of groundwater of three major aquifer systems, south-central region of Brazil

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
196p	Gastmans, D. Chang, H. K. Santos, V. Araguas, L. Belachew, D. Aggarwal, P. Terzer, S.	Brazil	Stable isotope composition of groundwater from unconfined aquifers and modern precipitation in southeastern of Brazil: key to understand past recharge conditions
197p	Gastmans, D. Menegário, A. Hutcheon, I.	Brazil	Stable isotopes, carbon-14 and hydrochemical characteristics of groundwater in a basaltic aquifer, São Paulo state, Brazil
200p	Meredith, K. Hollins, S. Cendon, D. (presented by Hughes, C.)	Australia	Measuring carbon isotope signatures in an evaporative environment: consequences for radiocarbon 'age'
201p	Sidi Haiba, B. Zouari, K. R. Trabelsi	Mauritania	Hydrogeochemical and isotopic characterization of the Continental Terminal aquifer in the Senegalo-Mauritanian basin-west Mauritania
204p	Betancur, T. Palacio, P. Ossa, J. Cano, A.	Colombia	Using hydrogeochemical and isotopic techniques to identify flow paths in the Aburrá valley hydrogeological system – Colombia
210p	Kovačič, K. Kožar Logar, J. Lipoglavšek, M. Korun, M.	Slovenia	The occurrence of selected radionuclides in ground waters from shallow and deep aquifers in Slovenia
221p	Rabe, S. Kamel, Z.	Niger	Recharge mode and salinization process in Diffa basin using isotopic and chemical tracers (south-east of Niger)
232p	Herrera Parra, H. Toro Espitia, L. E.	Colombia	Using isotope methods to assess groundwater recharge in coastal region in Colombia. Case study: Gulf of Morrosquillo aquifer
235p	Hamutoko, J. Wanke, H. Koeniger, P. Beyer, M. Lohe, C. Masule, N. Quinger, M.	Namibia	Use of environmental isotopes to study groundwater recharge of perched aquifers in the Cuvelai Etosha basin, Namibia

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
237p	Edirisinghe, V. Karunaratne, R. Samarakoon, N. Tilakaratna, N. Pitawala, A. Dharmagunawardhane, H A. Ranawaka, I. Wijekoon, D. Lenora, R.	Sri Lanka	Water quality deterioration study in northwestern limestone aquifer in Puttalam, Sri Lanka, using isotope and chemical technique
246p	Hassan, T. Sadek, M.	Egypt	New hydrogeological findings improve Nubian Sandstone Aquifer potential at Western Desert, Egypt
258p	Allocca, V. Stellato, L. De Vita, P. Ferrara, L. Arienzo, M.	Italy	Hydrogeological and hydrogeochemical study of the Cumae archaeological site (Phlegraean fields, southern Italy)
263p	Castro-López, J. Yépez-González, E. Robles-Morua, A. Garatuza-Payan, J.	Mexico	Shallow groundwater isoscape of the Cuchujaqui river basin in the northwestern Mexico
268p	Solomon, D. K. Gilmore, T. Solder, J. Kimball, B. Genereux, D.	United States of America	Determining groundwater transit times using SF ₆ in streams
273p	Vargas-Azofeifa, I. Ramirez, R. Molina, J.	Costa Rica	Conceptual model of the Tempisque aquifer, Guanacaste, Costa Rica
275p	Fouepe Takounjou, A. Ketchemen Tandia, B. Mohammad, B. Sigha Nkamdjou, L.	Cameroon	Geochemical and isotopic investigation of groundwater mineralization and contamination in the Yaérés flood plain, far north Cameroon
277p	Swana, K. Miller, J. Murray, R. Talma, S.	South Africa	Isotope characterisation as a means of differentiating deep vs shallow groundwater in an area considered for shale-gas extraction, Karoo basin, South Africa

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
293p	Caballero, A. Villareal, J. Bayard, C. Leone, O. Jaén, J. Tapia, A. Almaguer Carmenates, Y. Batista, J. A. Ballesteros, I.	Panama	Integration of isotopic and hydrogeological techniques for aquifer characterization in Santa Maria region-Republic of Panama
297p	Dunford, A. Miller, J. Clarke, C. Nakwafila, A.	South Africa	Analysis of salt and heavy metal accumulation in the Buffels river, South Africa
301p	Kemboi, E.	Kenya	Isotopic and chemical evidences for the origin and evolution of geothermal fluids at Olkaria geothermal field Naivasha, Kenya
304p	Mueller, T. Strauch, G. Al Mashaikhi, K. Aeschbach-Hertig, W.	Germany	Recharge of groundwater in the Dhofar mountains assessed by carbon-14 and stable H/O isotopes
322p	Adelana, S. Allinson, G.	Nigeria	Assessment of aquifer systems using stable isotope geochemistry in an urban agricultural district, southwest Melbourne, Australia
324p	Murad, A. Zhou, X. D. Yi, P. Alshamsi, D. Hou, X. L. Aldahan, A. Hussein, S. Yu, Z. B.	United Arab Emirates	Ra-226 in groundwater of the UAE: distribution and sources
359p	Hachaichi, Z. Chkir, N. Cognard-Planq, A. Zouari, K. Travi, Y.	Tunisia	Recharge processes and mineralisation mechanisms in a semi-arid aquifer system, Foussana basin, northwestern Tunisia

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
366p	Kamtchueng, B. Kusakabe, M. Fantong, W. Tanyileke, G. Hell, J. V.	Japan	Isotope hydrogeochemistry of groundwater in the lake Nyos catchment (northwest Cameroon)
367p	Mayer, A. Pola, M. Fabri, P. Piccinini, L. Zampieri, D.	France	Radium - radon - actinium systematic in geothermal groundwater: constraints for groundwater upwelling-time in the Euganean geothermal field (Italy)
368p	Bocanegra, E. Toro Espitia, L.E. Araguas, L.	Argentina	The IWAVE methodology applied to improve the state of knowledge of water resources in Latin America

Noble gas isotope studies

057p	Martínez, D. Fourre, E. Quiroz Londoño, O. M. Jean- Baptiste, P. Glok Galli, M. Dapoigny, A. Grondona, S.	Argentina	Groundwater residence time in the Pampeano aquifer (Argentina): multilevel piezometers and multi-tracers study
060p	Quiroz Londoño, O. Argentina Martínez, D. E. Fourre, E. Grondona, S. Jean-Baptiste, P. Dapoigny, A. Glok Galli, M.		Estimating aquifer recharge rates by using $^3\text{H}/^3\text{He}$ apparent ages and groundwater levels in the southeast of Buenos Aires province, Argentina
063p	Sanda, M. Jankovec, J. Milan, H. Vitvar, T. Ales, B.	Czech Republic	Age dating of groundwater using isotopes of hydrogen and helium in sediments and fractured bedrock of the Jizera mountains
083p	Marah, H.	Morocco	Tritium/ ^3He dating of groundwater in Sebou basin of Morocco

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
090p	Anovski, T. Anovska-Jovcheva, E. Lisichkov, K. Dimitrovski, D. Matsumoto, T. Aggarwal, P. Leis, A. Benischke, R. Micevski, E. Baara, N.	The fmr.Yug.Rep. of Macedonia	A comprehensive study on the origin of water in karst spring Rashche
091p	Anovska-Jovcheva, E. Lisichkov, K. Dimitrovski, D. Kuvendziev, S. Anovski, T. Arsov, L. Leis, A. Anovski, K.	The fmr.Yug.Rep. of humeMacedonia	Determination of the MRT and the volume of the water within the Zeden aquifer by which Rashce spring is recharged
131p	Weissbach, T. Aeschbach-Hertig, W. Raidla, V. Vaikmäe, R.	Germany	Noble gases of glacial origin in paleogroundwater in the northern part of the Baltic Artesian Basin, Estonia
174p	Darling, W. White, D. Goody, D.	United Kingdom	Testing tritium-helium groundwater dating in the Chalk of southern England
312p	Matsumoto, T.	IAEA	A VBA-Excel program for noble gas data analysis for groundwater dating and recharge temperature
314p	Romeo, N. Hillegonds, D. Han, L. F. Kainz, G. G. Matsumoto, T.	IAEA	Developments of noble gas facility in the Isotope Hydrology Laboratory, IAEA

Laser Spectroscopy Advances
Analytical Methods
Isotopic Hydrological Modeling
Nutrient Cycles and Contamination
Water Pollution Studies

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
Laser Spectroscopy Advances			
041p	Dennis, K. Carter, J. Kendall, C. Downing, B. Kraus, T. Huang, K.	United States of America	Continuous isotopic water sampling cavity ring-down spectroscopy (CIWS-CRDS) for real-time measurements of water isotopes on the Sacramento river delta
098p	Barbour, S. Hendry, M.	Canada	Development of in-situ vapour sampling for stable isotopes of water within unsaturated mine waste
110p	Martínez, D. E. Quiroz Londoño, O. M. Grondona, S. Bocanegra, E. M.	Argentina	The laser revolution in the hydrogeology group in Mar del Plata, Argentina
151p	Ebser, S. Feng, Z. Ritterbusch, F. Welte, J. Oberthaler, M. K. Kersting, A. Aeschbach-Hertig, W.	Germany	Dating with atom trap trace analysis – the Ar-39-ATTA apparatus
160p	Kersting, A. Aeschbach-Hertig, W. Ebser, S.	Germany	Dating with atom trap trace analysis of argon-39: methods of sample preparation
165p	Soto, D. Koehler, G. Hobson, K.	Canada	Nitrate isotopic analyses by combining the denitrifier method with laser spectroscopy
206p	Demény, A. Czuppon, G.	Hungary	Laser spectroscopic analyses of H and O isotope compositions in fluid inclusions: applications in paleoclimate/hydrology

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
Analytical Methods			
009p	Furuta, E. Iwasaki, N Kato, Y Tomozoe, Y	Japan	A new tritiated water measurement method with plastic scintillator
143p	Kraft, R. Assonov, S. S. Groening, M.	IAEA	δD of equilibrated bulk wood and lignin methoxyl groups: towards the development of reference materials for wood
168p	Groening, M. Assonov, S. Van Duren, M.	IAEA	Present status and strategic plan for the stable isotope reference materials at the IAEA
169p	Assonov, S. Fajgelj, A. Groening, M.	IAEA	Metrological aspects related to stable isotope reference materials: the traceability concept and uncertainty evaluation scheme supporting every day practice
170p	Assonov, S. Groening, M. Fajgelj, A.	IAEA	Challenges in maintaining the delta ¹³ C scale: status of carbonate-based stable isotope reference materials
178p	Meijer, H. Faghihi, V. Verstappen- Dumoulin, B. Jansen, H. Van Dijk, G. Aerts-Bijma, A. Kerstel, E. Gröning, M.	Netherlands	A new set of singly and doubly stable isotope labeled reference waters for research using isotope labelling
195p	Surma, J. Assonov, S. Staubwasser, M.	Germany	¹⁷ O-excess in highly evaporated natural waters from the Sistan desert (Iran)
220p	Di Fusco, E. Di Rienzo, B. Stellato, L. Marzaioli, F. Rubino, M. Porzio, G. D'Onofrio, A. Ricci, A. Terrasi, F.	Italy	Progress on AMS measurement for δ ¹¹ B at CIRCE

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
259p	Aguiar, R.	Brazil	Use of water stable isotopes as natural tracers of groundwater in the Engenho Nogueira watershed in Minas Gerais, Brazil
261p	Panetta, R. Federherr, E. Lange, L.	United Kingdom	Novel TOC/TN IRMS interface for simultaneous determination of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ of dissolved organic carbon and total dissolved nitrogen in aqueous samples
279p	Di Rienzo, B. Di Fusco, E. Stellato, L. Marzaioli, F. Rubino, M. Ricci, A. Terrasi, F. D'Onofrio, A.	Italy	QA/QC procedures for stable isotopes analysis of nitrogen ($\delta^{15}\text{N}$ - NO_3) and oxygen ($\delta^{18}\text{O}$ - NO_3) in environmental samples at CIRCE lab, Italy
309p	Holko, L.	Slovakia	Syringe life and memory effects in isotopic analyses performed by liquid water isotopic analysers – a case study for natural waters in central Europe
310p	Kumar, B. Han, L. F. Wassenaar, L. Klaus, P. M. Kainz, G. G. Helligonds, D. Brummer, D. Choudhry, M. Araguas, L. Aggarwal, P.	IAEA	A new tritium enrichment unit with continuous water filling and high enrichment factor
325p	Hillegonds, D. Matsumoto, T. Romeo, N.	IAEA	Calibration of dissolved noble gas measurements by air equilibrated water
326p	Hillegonds, D. Wassenaar, L.	IAEA	Assessment of an automatic TDCR liquid scintillation counter for use in low-level tritium measurement
327p	Hillegonds, D. Matsumoto, T. Romeo, N.	IAEA	Krypton isolation and purification from groundwater for ^{81}Kr age dating
328p	Hillegonds, D. Wassenaar, L.	IAEA	Results and analysis from the IAEA international tritium intercomparison 2012 (TRIC2012)

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
336p	Wassenaar, L. Hobson, K. Sisti, L.	IAEA	An online temperature controlled vacuum-equilibration preparation system for the measurement of ^2H of non-exchangeable-H and of ^{18}O in organic materials by isotope-ratio mass-spectrometry
339p	Musashi, M.	Japan	Antimony isotopic fractionation during the adsorption process demonstrated by anion-exchange chromatography
342p	Frew, R. Abraham, A. Leithner, Y.	IAEA/FAO	Determining ^2H in food using CH_3i and thermochemical elemental analysis
369p	Wahbi, A. Vreugdenhil, M. Heng, L. K. Oismuller, M. Strauss, P. Dercon, G.	IAEA/FAO	Cosmic ray neutron probe, uses, calibration and validation in Austria
Isotopic and Hydrological Modeling			
120p	Sasaki, S. Yamada, T. Yamada, T. J.	Japan	The internal dose calculation by using hydrological based lumping method
126p	Gillon, M. Cognard-Plancq, A. Marc, V. Nofal, S.greece Travi, Y. Babic, M. Daniel, M. Simler, R. Tison, F.	France	How much do human activities influence shallow groundwater recharge? an example of using isotope lumped parameters models to investigate the impact of irrigation practices in two Mediterranean alluvial aquifers
128p	Skrzypek, G. Mydlowski, A. Dogramaci, S. Hedley, P. Gibson, J. Grierson, P.	Australia	Hydrocalculator - a new tool for estimation of evaporative losses using stable isotope composition of water
146p	Deák, J. Kármán, K. Andó, A. Fórizs, I. Maloszewski, P.	Hungary	Verification and calibration of groundwater MODFLOW model of Szigetköz area (NW Hungary) using isotope tools

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
182p	Gherardi, F. Pierotti, L. Cortecci, G.	Italy	Hydrothermal gases in a shallow aquifer at Mt. Amiata, Italy: insights from stable isotopes and geochemical modelling
292p	Nittmann, J. Vives, L.	Argentina	Conceptual and numerical modeling of flow and groundwater age distribution on the southern portion of Guarani Aquifer System (GAS)
303p	Ivanov, M.	Bulgaria	The use of environmental isotopes to establish a hydrogeological conceptual model in Belene lowland – north Bulgaria
321p	Hokr, M. Balvín, A.	Czech Republic	Evaluation of tracer transport into a tunnel by various numerical models
373p	Adar, E. Halamish Sorek	Israel	Identifying & quantifying transient groundwater fluxes into complex groundwater system by Mixing Cells Modelling Approach – The mathematical algorithm of MCMusf Model
Nutrient Cycles and Contamination			
008p	Hocini, N. Sacchi, E.	Algeria	Contribution of hydrochemical and isotope tools to elucidate the origin of nitrate contamination in the coastal aquifer of the Mitidja plain (north east of Algiers)
025p	Li, S. Yue, F.	China	Evaluations of seasonal nitrate sources and denitrification in the karst catchment
040p	Re, V.	Italy	Coupling isotope hydrogeochemistry and social sciences to assess agricultural and domestic impacts in rural zones: the Bir Al-Nas approach
046p	Zouari, K. Re, V. Sacchi, E. Trabelsi, R. Kammoun, S.	Tunisia	The use of nitrate isotopes to assess agricultural and domestic impacts on groundwater quality in rural zones. the example of Grombalia basin (Tunisia)
148p	Gerber, C. Purtschert, R. Hug, R. Hunkeler, D. Paratte, D. Sülfenfuss, J.	Switzerland	Groundwater dating for predicting future evolution of nitrate concentrations

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
216p	Stellato, L. Terrasi, F. Marzaioli, F. D'Onofrio, A. Rubino, M. Di Fusco, E. Di Rienzo, B. De Vita, P. Allocca, V. Salluzzo, A. Rimauro, J. Romano, N. Celico, F.	Italy	The impact of surface water - groundwater interactions on nitrate cycling in the riparian and hyporheic zones assessed by means of hydrogeologic and isotopic techniques in the Alento river basin (Italy)
226p	Baisden, T. Horton, T. Rissman, C.	New Zealand	Applying dual-isotope nitrate tracing through ground and surface water in New Zealand case studies
242p	Goody, D.	United Kingdom	Nitrogen sources, transport and processing in peri-urban floodplains
254p	Trinh, V. G.	Viet Nam	Application of isotope techniques to estimate origin of nitrogen composition of groundwater in Hanoi area
319p	Matiatos, I.	IAEA	Application of stable isotopes in the identification of nitrate pollution sources in aquifers influenced by land-use
Water Pollution Studies			
038p	Skuratovic, Z. Mazeika, J. Petrosius, R. Martma, T.	Lithuania	Unsaturated zone investigations at the two radioactive waste disposal sites
051p	Izbicki, J.	United States of America	Insitu arsenic removal during groundwater recharge through unsaturated alluvium
054p	Popescu, R. Ionete, R. E. Costinel, D. Dinca, O. R. Ionita, G. Axente, D.	Romania	Industrial area investigation using stable isotopes
085p	Maruoka, T.	Japan	Tritium and iodine-129 in precipitations at Tsukuba, Japan, after the March 2011 Fukushima Daiichi nuclear plant accident

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
092p	Lujanienė, G.	Lithuania	The $\Delta^{14}\text{C}$, $\delta^{13}\text{C}$, $\delta^{15}\text{N}$ and plutonium isotopes signatures in the Baltic Sea suspended particulate matter and bottom sediments
121p	De Oliveira Godoy, J. Almeida, A. C. Duarte Pinto Godoy, M. L. Peternel, R.	Brazil	High uranium concentration on a bottled Brazilian mineral water
135p	Spadoni, M. Voltaggio, M. Sacchi, E. Sanam, R. Pujari, P. Labhasetwar, P. K.	Italy	Use of stable and unstable isotopes to study the effect of the disposal of fly ash on the pollution of shallow groundwaters: the example of the Koradi and Khaperkheda thermal power plants (Maharashtra, India)
157p	Miglioranza, K. S. B. Martínez, D. E. Fourre, E. Grondona, S. Jean- Baptiste, P. Quiroz Londoño, O. M. Gonzalez, M. Silva Barni, M. F.	Argentina	Groundwater residence time based on $^3\text{H}/^3\text{He}$ determinations and agricultural pollutants in the Pampeano aquifer (Argentina): organochloride compounds and nitrogen isotopes
171p	Barros Grace, V. Silva, J. C.	Brazil	Dumpsite impact assessment in a shallow aquifer region in Brazil: integrating different techniques
205p	Thach, S.	Cambodia	Isotope hydrogeochemistry of arsenic infested groundwaters in ta Khmau area, Cambodia – preliminary observations
247p	Ramaroson, V. Rakotomalala, C. Fareze, L. P. Razafintsalama, F. Rajaobelison, J. Rasolofonirina, M.	Madagascar	Chemical and isotope studies of the impacts on landfill on water quality in the site of Andralanitra, Antananarivo-Madagascar
256p	Carvalho, F. Oliveira, J. Malta, M.	Portugal	Uranium isotopes in surface waters and groundwater of Portugal

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
257p	Carvalho, F. Oliveira, J. Malta, M.	Portugal	Water quality in a uranium mining region
340p	Williams, M. Cowie, R. Wireman, M.	United States of America	Isotopic and geochemical approaches to characterizing water movement through abandoned mine workings, Nelson-Wooster-Humphrey tunnel Creede, Colorado
364p	El Shahat, F. Sadek, M. A. E. Moustafa, W. M. Hagag, K. H.	Egypt	Hydrogeochemical indicators for radioactive waste disposal site survey to the east of Nile delta, Egypt.

Poster Session 3: Thursday, 14 May 2015, 16:00-17:30

Atmosphere-Hydrosphere Interactions
Paleoclimate and Paleohydrology
Isotopes in Precipitation
Environmental Studies
Surface Water Isotopic Studies

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
Atmosphere-Hydrosphere Interactions			
056p	Wei, Z. Okazaki, A. Kim, W. Yokoi, M. Ono, K. Yoshimura, K.	Japan	Factors controlling isotopic composition of water vapor over a paddy field, Mase, Japan: using a high frequency in-situ isotope observation and isotope enabled GCM
067p	Steen-Larsen, H. Bonne, J. L. Jouzel, J. Masson-Delmotte, V. Sveinbjornsdottir, A. Werner, M. Zakharov, V.	Denmark	Arctic water cycle: new constraints from water vapor isotope observations
101p	Bonne, J. Steen-Larsen, H. Risi, C. Werner, M. Sodemann, H. Lacour, J. L. Delmotte, M. Clerbaux, C. Sveinbjörnsdóttir, Á. Masson-Delmotte, V.	France	Combining multiple types of datasets of water isotopic composition: insights from the analysis of the summer 2012 Greenland heat wave
181p	Cauquoin, A. Jean-Baptiste, P. Risi, C. Fourré, É. Landais, A. Stenni, B.	France	Implementation of tritium in the LMDZ-iso General Circulation Model for the study of the relationships between stratospheric air inputs into the lower troposphere, water cycle and climate

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
250p	Vallet-Coulomb, C. Delattre, H. Sonzogni, C. Cherain, Y. Boutron, O.	France	Combining isotopic measurements of atmospheric vapor and lagoon water for analysing isotope fractionation during evaporation
255p	Nusbaumer, J. Noone, D.	United States of America	The sensitivity of simulated water isotope distributions to differing climate model cloud parameters
294p	Konecky, B. Noone, D. Nusbaumer, J. Cobb, K.	United States of America	ENSO and Indo-Pacific water isotopes: observations, modeling, and implications for proxy reconstructions
299p	Yepez Gonzalez, E. Tarin, T. Garatuza-Payan, J. Robles-Morua, A	Mexico	Evapotranspiration flux partitioning with real time stable isotope monitoring of water vapor in the monsoon region of northwestern México
Paleoclimate and Paleohydrology			
130p	Martma, T. Isaksson, E. Kohler, J. Pohjola, V. Vaikmäe, R. Vega, C.	Estonia	The ice-core stable isotope records from Svalbard glaciers as proxies of climate and environmental changes
138p	Masson-Delmotte, V. Bolliet, T. Brockmann, P.	France	An online search and visualization tool for water stable isotope records from natural archives
139p	Tokarev, I. Avramenko, I. Voronyuk, G.	Russian Federation	The Eemian sea and follow palaeo-hydrology of Baltic – White Sea region evidence from groundwater stable isotope ($\delta^2\text{H}$, $\delta^{18}\text{O}$) composition
188p	Hatvani, I. Kern, Z.	Hungary	Weighting alternatives (precipitation vs. accumulation) for water stable isotopes – implications for ice core records
240p	Zech, M. Hepp, J. Tuthorn, M. Zech, R. Rozanski, K.	Germany	Coupling ^2H and ^{18}O biomarker analyses in palaeoclimate research: potential, conceptual model and validation

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
283p	Hepp, J. Zech, R. Tuthorn, M. Glaser, B. Rozanski, K. Zech, W. Zech, M.	Germany	Reconstructed isotopic composition of leaf water provides new insight into hydrological changes in east Africa during the last glacial

Isotopes in Precipitation

019p	Sanchez-Murillo, R. Welsh, K. Esquivel, G. Birkel, C. Corrales, J. Boll, J. Brooks, E. Roupsard, O. Saenz, O. Katchan, I. Soulsby, C. Arce, R.	Costa Rica	Key drivers controlling daily stable isotope variations in precipitation of Costa Rica: Caribbean Sea versus eastern Pacific Ocean moisture sources
022p	Nda, B. Beraaouz, E. Bouchaou, L.. Hanich, L. Michelot, J.L.	Morocco	Use of environmental isotopes for the assessment of snow water resources in the Moroccan high Atlas mountains: contribution to surface and groundwater recharge
023p	Varlam, C. Duliu, O. Faurescu, I. Vagner, I. Faurescu, D.	Romania	Tritium time series in precipitation of Rm. Valcea, Romania
031p	Djebebe-Ndjiguim, C. Foto, E. Backo, S. Basse-Keke, E. Nguerekossi, B. Zoudamba, N. Alladin, O. Mabingui, J. Huneau, F. Garel, E. Celle-Jeanton, H.	Central African Republic	New isotopic data on precipitation and river water in the Central African Republic (GNIP and GNIR stations at Bangui)

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
033p	Huneau, F. Garel, E. Santoni, S. Jaunat, J. Celle-Jeanton, H.	France	A new network for isotopes in precipitation of Corsica (France)
061p	He, S. Goodkin, N. Niezgoda, K. Ding, W. Wang, X. Rubin, C. Watts, S.	Singapore	Stable isotopes of daily precipitation in Singapore: a preliminary result
068p	Al-Paruany, K. Al-Naseri, S.	Iraq	Distribution of stable isotopes (^{18}O & ^2H) in precipitation in Iraq
071p	Sueltenfuss, J.	Germany	Tritium in precipitation in the southern North Sea: a marker for local formed water vapour
078p	Hunjak, T. Roller-Lutz, Z. Lutz, H.	Croatia	Stable isotope composition of the precipitation in Croatia
095p	Kebede Gurmessa, S. Tujuba, T. Elias, B.	Ethiopia	The daily ^{18}O and ^2H pattern of rainfalls in Addis Ababa and their link to IWV, moisture residence time and recycling
096p	Vreča, P.	Slovenia	Isotopic composition of precipitation in north-west Slovenia for the period 2010–2013
108p	Bottyán, E. Czuppon, G. Palcsu, L. Kármán, K. Weidinger, T. Haszpra, L.	Hungary	9 year long moisture source diagnostic for the precipitation in Debrecen, east Hungary: implications for the changes in the climate regime
115p	Contreras, T.	Honduras	Establishing the local meteoric water line in the El Cajon reservoir, Honduras
116p	Gourcy, L. Arnaud, L. Salquebre, D.	France	Of the importance of d-excess in understanding recharge process in two case studies of France

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
127p	Ichiyangi, K. Tanoue, M. Yoshikuni, T.	Japan	Stable isotopes in precipitation across Japan based on the intensive observation in 2013
144p	Persoiu, A. Nagavciuc, V. Badaluta, C.	Romania	Stable isotopes in precipitation in Romania – a first overall map
149p	Conroy, J. Cobb, K. Noone, D.	United States of America	Water vapor and precipitation isotope variability associated with western tropical pacific convective storms
158p	Schotterer, U.	Switzerland	The transfer of the isotope signal in precipitation to surface water and groundwater in Switzerland
202p	Ketchemen Tandia, B. Nlend, B. Y. Ngo Boum Nkot, S. Envoutou, H.	Cameroon	Isotopic study of rainfall in Douala-Cameroon (GNIP station no. 6491001)
207p	Czuppon, G. Bottyán, E. Weidinger, T. Kármán, K. Haszpra, L.	Hungary	Spatial and temporal variabilities in stable isotope compositions of precipitation and air moisture sources in Hungary
229p	Terzer, S. Wassenaar, L. Araguas, L.	IAEA	RCWIP2 – an improved regionalized cluster-based precipitation isoscape ($\delta^{18}\text{O}$, $\delta^2\text{H}$)
231p	Terzer, S. Araguas, L. Pucher, A. Kriz, K.	IAEA	Recent developments in the Global Network of Isotopes in Precipitation
253p	Kern, Z. Kohán, B. Czinder, A. Csonka, D. Leuenberger, M.	Hungary	Variogram analysis of precipitation $\delta^{18}\text{O}$ in the Great alpine region - implications for isoscape modeling
281p	Basu, S. Sanyal, P.	India	Disentangling the effect of climatic controls on rainfall ^{18}O variability in eastern India

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
291p	Kralik, M. Terzer, S. Wyhlidal, S.	Austria	Vienna GNIP – ANIP – station: a unique station with 40 years of dual measurements
306p	Diaw, M. Mall, I. Gaye, C. B. Faye, S.	Senegal	Chemical and isotopic characteristics of rain waters in Senegal north coastline
320p	Butt, S. Tasneem, M. A. Ali, M. Muhammad, F.	Pakistan	Variation in isotopic composition of precipitation with identification of vapors source using deuterium excess parameter as a tool: isotopic study at Tarbela dam site in Pakistan
354p	Tanoue, M. Ichiyanagi, K.	Japan	Verification of a regional isotope circulation model throughout Japan
357p	Aguirre Dueñas, E. Sanchez-Murillo, R. Gallardo Amestica, M. Moya Vega, P.	Chile	A 10-yr record of stable isotope variations in precipitation across Chile
361p	Stumpp, C. Maloszewski, P. Stichler, W.	Germany	Analysis of long-term stable isotopic composition in German precipitation and rivers
374p	Mueller, S Larsen, K. S. Jessen, S. Popp, T. J. Sorensen, J. H. Nielsen, N. W.	Denmark	$^{18}\text{O}/^2\text{H}$ composition in Danish precipitation

Environmental Studies

001p	Alonso-Hernández, C.	Cuba	Tracing organic matter sources and carbon burial in a tropical lagoon of the Caribbean Sea
004p	Thin, M. Sacchi, E. Setti, M. Hlaing, H.	Myanmar	Geochemical, mineralogical and isotopic investigation of Inle Lake (Southern Shan State, Myanmar): preliminary results
015p	Ben Hamouda, M. Araguas, L.	Tunisia	Use of geochemical tracers for characterization and quantification of water leakage at the Joumine dam site, Tunisia

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
052p	Mikalauskienė, R. Mažeika, J. Baužien, I.	Lithuania	Exploring the use of gamma-ray spectrometry as non-destructive method to reconstruct short-term environmental changes
064p	Al-Naseri, S. Abdulrazzaq, M.	Iraq	Isotopic and chemical study for the surface and ground water interaction in the south of Iraq
065p	Hladyniuk, R. Longstaffe, F. J.	Canada	The isotopic history of lake Ontario
073p	Trinh, A. D. Le, T. P. Q. Vu, D. L. Ta, T.	Viet Nam	Stable isotopes as tracers of anthropogenic activities in a tropical river system
104p	Bocanegra, E. Quiroz Londoño, O. M. Del Rio, J. L. Farenga, M.	Argentina	Interaction between groundwater and wetlands caused by open pit mining in southeast Buenos Aires, Argentina
105p	Barros Grace, V. Baneschi, I. Ramos, D. Bail, R.	Brazil	Groundwater interactions in Babitonga bay hydrologic complex and salinity inversions in the estuarine zone: evidences for submarine groundwater discharge (SGD)
132p	Mohammadzadeh, H. Kazemi, M.	Iran	Geothermal reservoir characteristics (T and depth) of Ayub Peighambar and Shafa hot springs using geothermometers and environmental ² H and ¹⁸ O isotopes
156p	Reynard, L. Burt, N. Tuross, N.	United States of America	Variability in oxygen and hydrogen isotopes in human hair and limitations to geolocation
164p	Costinel, D. Ionete, R. Popescu, R. Stefanescu, I. Dinca, O. Butnaru, G.	Romania	Stable isotopic fingerprint of water from <i>vitis vinifera</i> plants growing in different environmental conditions
213p	Gomez, M. Aravena, R. Álvarez, A. Sandra, I. Donna, F.	Argentina	Application of isotopic techniques for water resource management in an arid region of western Argentina

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
217p	Villegas, J. León Peláez, J. D. Betancur, T. Flórez, C. P. García Leoz, V. Suescún Carvajal, D.	Colombia	Assessing the effects of land use conversion in tropical mountains through hydrological, hydro chemical and isotopic monitoring: insights and preliminary observations
218p	Cruz Da Silva, G. Moreira, M. Z. De Luca Rebello Wagener, A. De Oliveira Godoy, J. M.	Brazil	Assessment of water use in Brazilian sugarcane crops through stable isotopes
233p	Wanke, H. Hamutoko, J. T.	Namibia	Isotope-hydrology investigation of groundwater in the Namib desert, Namibia
245p	Meier, C. Knoche, M. Merz, R. Weise, S.	Germany	Monitoring of stable isotopes in river water and precipitation in the Tajik Pamirs
251p	Heredia, J. Montalván, F. J. Ruiz, J. M. García De Domingo, A. Pardo Igúzquiza, E. Elorza, F. J.	Spain	Environmental isotopes studies in wetland researching: Fuente de Piedra lagoon (Malaga, Spain)
265p	Dampare, S. B. Ganyaglo, S. Y. Osae, S. Adomako, D. Teye, E. M. Egbi, C. D.	Ghana	The use of hydrochemistry and stable isotopes ($\delta^{18}\text{O}$, $\delta^2\text{H}$) to investigate surface water and groundwater quality in the Lower Volta basin of Ghana
329p	Osman, A. Bister, S. Daroui, A. Riebe, B. Walther, C.	Germany	^{129}I and stable iodine in natural waters from Lower Saxony, Germany

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
Surface Water Isotopic Studies			
029p	Helie, J. Hillaire-Marcel, C. Rosa, E.	Canada	Human impacts on large river systems of eastern Canada: isotopic insights
035p	Yi, Y. Gibson, J. Birks, J.	Canada	Water balance assessment across Canada
081p	Borodulina, G. Avramenko, I. Tokarev, I.	Russian Federation	Investigation of hydrology of catchment area of small river in Karelia (Russia) by high-resolution record of ² H and ¹⁸ O in precipitations and river water, including experimental evaluation of evaporation
087p	Mendoza, N. Castañeda, S. Racadio, C. Sucgang, R.	Philippines	Distribution of stable isotopes of liquid water in freshwater resources within Cagayan Valley river basin, Northern region Philippines
111p	Ronkanen, A. Isokangas, E.	Finland	Stable isotope of water as a tool to design constructed wetlands
112p	Good, S. Bowen, G. Noone, D.	United States of America	Stable isotope transfer functions for vadose zone soils: the role of ecohydrologic routing in determining runoff and evaporation isotope composition
114p	Racadio, C. Mendoza, N.	Philippines	Distribution of stable isotopes of liquid water in freshwater resources within water resources Region X, southern Philippines
117p	Marttila, H. Rossi, P. Puhakka, S. Leinonen, K. Tolonen, K. Erkinaro, J. Hjort, J. Heino, J.	Finland	Flow formation in streams at high latitudes: do isotopes and catchment properties reveal patterns of groundwater dominance?
122p	Niinikoski, P.	Finland	The residence time of water in rivers: implications on water transfer routes

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
125p	Eskelinen, R. Ronkanen, A. K. Isokangas, E. Marttila, H. Rossi, P. Kløve, B.	Finland	Review of stable isotope studies of water done in Finland
129p	Rossi, P. Isokangas, E. Marttila, H. Kløve, B. Ala-Aho, P.	Finland	Using stable water isotopes in capture zone characterization of boreal springs
133p	Becher Quinodoz, F. Blarasin, M. Panarello, H.	Argentina	Characterization of groundwater-surface water mixing processes using environmental isotopes and geochemical models
141p	Blarasin, M. Panarello, H. Ducós, E. Becher Quinodoz, F.	Argentina	Radon and geochemical preliminary model to assess interactions between groundwater and surface water in a Pampean stream
154p	Melikadze, G. Zhukova, N. Kapanadze, N. Vitvar, T. Holko, L.	Georgia	Assessment of the role of snow in hydrological cycle of the Borjomula-Gudjareti-Tskali rivers basin, Georgia, using stable isotope approaches
155p	Smith, A. Stadnyk, T.	Canada	Partitioning evapotranspiration in sparsely gauged basins utilizing iso-hydrological modelling
189p	Gebremichael, M. Jasechko, S.	Ethiopia	The oxygen and hydrogen isotopic composition of Ugandan waters
208p	Meier, C. Osenbrück, K. Seitz, H. M. Weise, S. M.	Germany	⁷ Li for detecting ground water contributions and underground passages of river water

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
211p	Michalko, J. Bodiš, D. Ženišová, Z. Malík, P. Grolmusová, Z. Luptáková, A. Kordík, J. Bottlik, F. Nech, P. Švasta, J.	Slovakia	Groundwater and surface water interaction in the area of Podunajska Nizina lowland and Trnavska Pahorkatina hills
214p	Wyhlidal, S. Rank, D. Kralik, M.	Austria	A 50 years' isotope record of Danube water – long- term trends and short-term signals
215p	Villegas, P. Betancur, T. Toro, L. E.	Colombia	Hydrochemical environmental isotope study of the aquifer on the Gulf of Urabá - Colombia
219p	Vadillo, I. Benavente, J. Urresti, B. Jimenez, P.	Spain	Application of hydrochemistry and stable isotopes (^2H , ^{18}O , ^{13}C -DIC, ^{34}S - SO_4 , ^{18}O - SO_4) for river/groundwater interaction in Velez river aquifer, Spain
227p	Andersen, M. Rau, G. Meredith, K. Mccallum, A. Acworth, I.	Australia	Use of stable and radioactive isotopes to unravel surface water groundwater interactions in a developed catchment
228p	Rau, G. Rutledge, H. Andersen, M. S. Unland, N. Hofmann, H. Gilfedder, B. Atkinson, A. Cartwright, I. Baker, A. Acworth, I.	Australia	Natural and induced surface groundwater exchange pathways revealed using 222-Rn and hydrochemical parameters
248p	Adallal, R. Vallet-Coulomb, C. Benkaddour, A. Sonzogni, C. Rhoujjati, A. Vidal, L.	France	Simulation of the hydrological and isotopic balance of an endorheic lake at a monthly time step (Azizga lake, Middle Atlas, Morocco)

<i>No of Poster IAEA-CN-225-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
260p	Vadillo, I. Urresti, B. Jimenez, P. Benavente, J.	Spain	Human-driven enrichment of water stable isotopes (^{18}O , ^2H) in an intensive agriculture area (Guadalhorce basin, southern Spain)
285p	Rai, S. Rao, S. Kumar, S. Rawat, Y. S. Singh, R. D.	India	Identification of recharge sources of shallow groundwater and its interaction with surface water in a part northwestern India, using environmental isotope
286p	Lapp, A. Clark, I.	Canada	Seasonal variability of groundwater contribution to watershed discharge in discontinuous permafrost in the north Klondike river valley, Yukon
290p	Herod, M. Clark, I. Li, T.	Canada	A time series of ^{129}I and hydrogeochemistry in a discontinuous permafrost watershed: insights from multivariate statistical methods
296p	Valladares, A. Rodriguez, L. Guarracino, L. Vives, L.	Argentina	A classical water balance of the Iberá wetland validated by GRACE satellite data
302p	Stewart, M.	New Zealand	Streamflow component separation by tracer- and non-tracer-based methods
315p	Ehleringer, J. Barnette, J. Tipple, B. Bowen, G.	United States of America	Multi-decadal observations of water isotopes impacting the urban Salt Lake valley (USA) – from montane sources through tapwater to the Great Salt Lake terminus
337p	Michel, R. Araguas, L. Aggarwal, P. Newman, B.	United States of America	Application of the ratio of tritium concentrations in precipitation/surface water ratios to estimate timescales for historical surface water tritium data
338p	Tweed, S. Leblanc, M. Niels, M.	France	Origins of waters in the Australian tropics using ^{18}O and ^2H values
358p	Rosa, E. Hillaire-Marcel, C. Hélie, J. F. Myre, A.	Canada	Controls on seasonal $\delta^2\text{H}$ - $\delta^{18}\text{O}$ patterns in large rivers from eastern Canada

PARTICIPATION IN IAEA SCIENTIFIC MEETINGS

Governments of Member States and those organizations whose activities are relevant to the meeting subject matter are invited to designate participants in IAEA scientific conferences and symposia. In addition, the IAEA itself may invite a limited number of scientists as invited speakers. Only participants designated or invited in this way are entitled to present papers and take part in the discussions.

Representatives of the press, radio, television or other information media and members of the public, the latter as 'observers', may also be authorized to attend, but without the right to take part in the proceedings.

Scientists interested in participating in any of the IAEA meetings should request information from the Government authorities of their own countries, in most cases the Ministry of Foreign Affairs or national atomic energy authority.

PUBLICATIONS

All IAEA publications may be ordered at the Registration Desk or directly from:

Marketing and Sales Unit, Publishing Section
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 Vienna, Austria
Fax: +43 1 2600 29302
Tel.: +43 1 2600 22417
Email: sales.publications@iaea.org
<http://www.iaea.org/books>

IAEA PUBLICATIONS RELATED TO THE SUBJECT OF THE SYMPOSIUM

STI/PUB/1587	Isotope Methods for Dating Old Groundwater	2013
IAEA-TECDOC-1723	Using Isotopes for Design and Monitoring of Artificial Recharge Systems	2013
IAEA-TECDOC-1695	Application of Isotope Techniques for Assessing Nutrient Dynamics in River Basins	2013
STI/PUB/1580	Isotopes in hydrology, marine ecosystems and climate change studies	2013
IAEA-TECDOC-1673	Monitoring Isotopes in Rivers: Creation of the Global Network of Isotopes in Rivers (GNIR)	2012
IAEA-TECDOC-CD-1595	Nuclear and Isotopic Techniques for the Characterization of Submarine Groundwater Discharge in Coastal Zones	2010
STI/PUB/1423	Atlas of Isotope Hydrology Morocco	2010
IAEA-TCS-35	Laser Spectroscopic Analysis of Liquid Water Samples for Stable Hydrogen and Oxygen Isotopes	2009
IAEA-TECDOC-1618	Application of Isotopes to the Assessment of Pollutant Behaviour in the Unsaturated Zone for Groundwater Protection	2009
IAEA-TECDOC-1611	Estudios de Hidrología isotópica en América Latina	2009
STI/PUB/1423	Atlas of Isotope Hydrology The Americas	2009
STI/PUB/1364	Atlas of Isotope Hydrology Asia and the Pacific	2008
STI/PUB/1302	Atlas of Isotope Hydrology Africa	2007

FORTHCOMING SCIENTIFIC MEETINGS SCHEDULED BY THE IAEA

2015

International Experts Meeting on Strengthening Research and Development Effectiveness in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant (IEM 8)
16-20 February 2015, Vienna, Austria

International Experts' Meeting on Assessment and Prognosis in Response to a Nuclear or Radiological Emergency (IEM 9)
20-24 April 2015, Vienna, Austria

International Symposium on Isotope Hydrology: Revisiting Foundations and Exploring Frontiers
11-15 May 2015, Vienna, Austria

International Conference on Computer Security in a Nuclear World: Expert Discussion and Exchange
1-5 June 2015, Vienna, Austria

International Conference on Operational Safety
9-12 June 2015, Vienna, Austria

International Conference on Management of Spent Fuel from Nuclear Power Reactors – An Integrated Approach to the Back-End of the Fuel Cycle
15-19 June 2015, Vienna, Austria

International Conference on Operational Safety
23-26 June 2015, Vienna, Austria

International Conference on Clinical PET-CT and Molecular Imaging (IPET 2015): PET-CT in the era of multimodality imaging and image-guided therapy
5-9 October 2015, Vienna, Austria

International Conference on Global Emergency Preparedness and Response
19-23 October 2015, Vienna, Austria

International Conference on Research Reactors: Safe Management and Effective Utilization
16-20 November 2015, Vienna, Austria

2016

International Conference on Safety Leadership and Safety Culture – 30 years developing Pragmatic Solutions
22-26 February 2016, Vienna, Austria

International Conference on Regulatory Effectiveness
April 2016, Vienna, Austria

International Conference on Advancing the Global Implementation of Decommissioning and Environmental Remediation Programmes
23-27 May 2016, Madrid, Spain

Ministerial Conference on Nuclear Applications
TBD, Vienna, Austria

International Conference on Integrated Medical Imaging in Cardiovascular Diseases (IMIC-II-2016)
10-14 October 2016, Vienna, Austria

26th IAEA Fusion Energy Conference
17-22 October 2016, Kyoto, Japan

3rd International Conference on Knowledge Management in Nuclear Energy – Challenges and Approaches
7-11 November 2016, Vienna, Austria

International Conference on the Safety of Radioactive Waste Management
21-25 November 2016, Vienna, Austria

2nd International Conference on Nuclear Security
5-9 December 2016, Vienna, Austria

For information on forthcoming scientific meetings,
please consult the IAEA web site:
<http://www-pub.iaea.org/iaeametings/>
IAEA web site: <http://www.iaea.org/>

NOTES

International Atomic Energy Agency

IAEA-CN-225

Vienna International Centre

PO Box 100

1400 Vienna, Austria

Telephone No.: +43 1 2600 (0) plus extension

Telefax No.: +43 1 26007

Email: official.mail@iaea.org

